

Name: _____ ()

Class: _____

Chapter Quiz :

A. Simple problems

(Suggested solution)

The suggested time allocated for **Question 1 to 3 is 10 minutes.**

1. Calculate the following:

a. $\frac{1}{12} + \frac{3}{12} - \frac{2}{12}$

$$= \frac{1+3-2}{12}$$

$$= \frac{2}{12}$$

$$= \frac{1}{6}$$

b. $\begin{array}{r} 3.6 \\ \times 1.7 \\ \hline \end{array}$

$$\begin{array}{r} 3.60 \\ 252 \\ \hline \end{array}$$

$$\begin{array}{r} 252 \\ 612 \\ \hline \end{array}$$

$$\underline{\underline{6.12}}$$

c. $\frac{2}{7} \div \frac{3}{7}$

$$= \frac{2}{7} \times \frac{7}{3}$$

$$= \frac{2}{3}$$

2. Write the following as fractions in their simplest form:

a. 0.479

$$= \frac{479}{1000}$$

b. 3.4

$$= 3\frac{4}{10}$$

$$= 3\frac{2}{5}$$

3. Convert the following fractions to decimals:

a. $\frac{293}{1000}$

$$= 0.293$$

b. $8\frac{2}{5}$

$$= 8\frac{2 \times 2}{5 \times 2}$$

$$= 8\frac{4}{10}$$

$$= 8.4$$

B. More complex problems

The suggested time allocated for Question 4 to 6 is 10 minutes.

Calculate question 4 and 5 and show your working clearly (including column form):

4. Convert $\frac{2}{3}$ into a recurring decimal.

$$\begin{aligned}\frac{2}{3} \\ = 2 \div 3 \\ = 0.\dot{6}\end{aligned}$$

Calculation

$$\begin{array}{r} 0.66\ldots \\ 3 \overline{)20} \\ \underline{18} \\ 20 \\ \underline{18} \end{array}$$

5. $39.52 \div 1.3$

$$\begin{aligned} &= 3952 \div 130 \\ &= 30.4 \end{aligned}$$

$$\begin{aligned} &\text{or} \\ &395.2 \div 13 \\ &= 30.4 \end{aligned}$$

Calculation

$$\begin{array}{r} 30.4 \\ 130 \overline{)3952} \\ \underline{390} \\ 520 \\ \underline{520} \end{array}$$

6. Arrange the following in ascending order (from smallest to largest). Show your workings clearly.

0.63	$\frac{61}{1000}$	6.3	$\frac{1}{2}$	$\frac{62}{100}$
(0.63)	0.061	6.3	0.5	0.62
or $(\frac{630}{1000})$	$\frac{61}{1000}$	$\frac{6300}{1000}$	$\frac{500}{1000}$	$\frac{620}{1000}$
$\frac{61}{1000} < \frac{1}{2} < \frac{62}{100} < \frac{63}{100} < 6.3$				

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C. Challenging problemsThe suggested time allocated for **Question 7 to 8 is 10 minutes.**

Solve the problem and show your working clearly.

7. Mary has a piece of timber that is 3.6 meters long and she divides it into 0.25m pieces. How many pieces will she have? How many meters of timber does she have left over?

$$\begin{aligned}
 &3.6 \div 0.25 \\
 &= 360 \div 25 \\
 &= 14 \text{ R } 0.1\text{m}
 \end{aligned}$$

She will have 14 pieces of timber
and 0.1m of timber is left over.

$$\begin{array}{r}
 14. \\
 25 \overline{) 360} \\
 \underline{25} \\
 110 \\
 \underline{100} \\
 100 \\
 \underline{100} \\
 0.10\text{m}
 \end{array}$$

8. Enoch earned \$360,000 last year. He lost $\frac{1}{12}$ of the amount in tax and $\frac{2}{3}$ of the remainder was needed to pay his home loan. How much did Enoch have left?

$$\begin{aligned}
 \text{Tax: } &360000 \times \frac{1}{12} \\
 &= \$30000 \\
 \hline
 \text{Money left after tax:} & \\
 &360000 - 30000 \\
 &= \$330000 \\
 \hline
 \text{Home loan:} & \\
 &330000 \times \frac{2}{3} \\
 &= \$220000 \\
 \hline
 \text{Enoch have left:} & \\
 &330000 - 220000 \\
 &= \$110000
 \end{aligned}$$

$$\begin{aligned}
 \text{or} & \\
 &360000 \times (1 - \frac{1}{12}) \times (1 - \frac{2}{3}) \\
 &= 360000 \times \frac{11}{12} \times \frac{1}{3} \\
 &= 110000 \\
 \text{Enoch have left } &\$110000
 \end{aligned}$$

D. Unfamiliar problems

The suggested time allocated for **Question 9 is 10 minutes.**

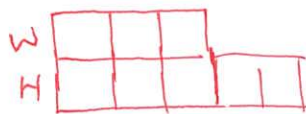
9. A family of four total 100 years in age. The parent's ages combine to be 0.8 of this total. The wife is only $\frac{3}{5}$ of the husband's age. The children are 0.2 of the total with the oldest child being $\frac{7}{10}$ of this. How old are the four people in this family?

Let Wife's age be w years
Husband's age be H years
Younger child be YC years old
Oldest child be OC years old.

According to the question :

$$w + H + YC + OC = 100$$

$$w + H = 100 \times 0.8 = 80$$



Wife is $\frac{3}{5}$ of the husband

$$\therefore w = \frac{3}{5} H$$

$$\therefore \text{wife} = \frac{3}{5} \times 80$$

$$\text{wife} = 30$$

$$\text{husband} = \frac{5}{3} \times 30$$
$$= 50$$

$$YC + OC = 100 \times 0.2 = 20$$

$$OC = \frac{7}{10} \times 20$$
$$= 14$$

$$YC = 20 - 14$$
$$= 6$$

Husband: 50 years old,

Wife: 30 years old

Older child: 14 years old

Younger Child: 6 years old

End of Assessment